

Selection of SAW Consumable based on Industry & Applications

| Industry | Application | Base Metal Grade | Welding Consumable | |
|--|--|---|------------------------------|------------------------|
| | | | SAW FLUX | SAW WIRE |
| 1) General Structural Constructions – Without Impact Toughness Requirement | I Beam, Bridge, Pipeline, Building Frameworks | A36, A131, A284, Gr 70 A573 | Automelt A55 | Automelt EL8/ EM12K |
| 2) General Structural Constructions – With Impact Toughness Requirement | I Beam welding, pipeline | Gr 60 SA 516 / IS 2062 | Automelt B31 or Automelt B71 | Automelt EL8/ EM12K |
| | Stainless steel | SS 304L | Automelt S33 | Subinox 308L |
| 3) Cylinder Manufacturing | Cylinder Manufacturing | Gr 60 /70 SA 516 & HSFQ 450 | Automelt A57 | Automelt EL8 |
| 4) Pre-Engineering Business (PEB) Segment | H beam Welding (Twin Wire Welding) | Gr 60 /70 SA 516 & IS 2062 | Automelt A82 | Automelt EM12K |
| 5) Spiral Pipe Welding | Both side spiral welding | IS 2062 & IS 10748 | Automelt A82 | Automelt EM12K |
| 6) Railway / RDSO Application | Bridges, Structural supporting parts | E250 IS 2062, CL I & IA IS 1875 | Automelt Gr IV | Automelt EL8 |
| | | E300 & E350 IS 2062, CL II & IIA IS1875, Gr I & II IS 2002 | Automelt B71 | Automelt EM12K |
| | | E410 & E450 IS 2062, Cl III A IS 1875, Gr III IS 2002 | Automelt B71 | Automelt EA4 |
| 7) Pressure Vessels, Heavy Equipment, Oil & Gas Industry | Hull / Basic Construction | Gr 65/ 70 SA516, IS 2062, ABS EH36 | Automelt B71 | Automelt EM12K |
| | Critical Process Equipment | Gr 65/ 70 SA516, Gr F1 SA181, Gr. A, B, C SA105/ SA106/ SA210 | Automelt B41 | Automelt EH10K / EH12K |
| | Drilling Equipment | 4130 Cast Steel | Automelt B41 | Automelt EF3 |
| | Drilling Equipment made by Q & T material grades | ABS EQ47 / FQ47 | Automelt B41 | Automelt EA4/ EF2 |
| | Cryogenic Storage | Gr 65 SA 572 / Gr A, B SA 203 | Automelt B41 | Automelt ENi2 |
| | | Gr C, D SA 203 | Automelt B41 | Automelt ENi3 |
| | | A 645 (5% Nickel Steel), A 353 & A553 (9% Nickel Steel) | Automelt S79 | Automelt NiCrMo-3 |

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| | | | SAW FLUX | SAW WIRE |
| | Cryogenic Storage (-196° C) | SS 304L/ 316L | Automelt S33 | Subinox 308L Spl/ 316L |
| 8) Transportation Industry | Ship Building | S275 & S355 | Automelt B71/ B41 | Automelt EM12K/ EH12K |
| 9) Pipeline Industry | LSAW & DSAW | API A25, A, B, X42-X52 | Automelt B71 | Automelt EM12K |
| | LSAW & DSAW | API A25, A, B, X42-X65 | Automelt B41 | Automelt EH12K |
| | LSAW & DSAW | API A25, A, B, X60-X70 | Automelt B41 | Automelt EF3 |
| 10) Chemical & Food Processing Industry | General Corrosion resistant Application | SS 304 / SS 304L | Automelt S33 | Subinox 308L |
| | General Corrosion resistant Application With -196° C | SS 304L/ 316L | Automelt S33 | Subinox 308L Spl/ 316L |
| | Dissimilar Welding | SS 304L to C-Mn Steel | Automelt S33 | Subinox 309L |
| | Chloride & SCC resistance Application | SS 2205 | Automelt S33 | Subinox 2209 |
| | | SS2507 | Automelt S33 | Subinox 2594 |
| | High Corrosion Resistance | Nickel based alloy 625 | Automelt S79 | Automelt NiCrMo3 |
| 11) Power Plant Thermal | Water wall & Boiler Tubes & Pipes | SA106 Gr A, B, C | Automelt A81/ B71 | Automelt EM12K |
| | Water wall | A204 Grade B/ 15Mo3/ 243 B | Automelt A81 | Automelt EA2 |
| | Boiler Tubes & Pipes | WB36/ 15NiCuMoNb5 | Automelt B41 | Automelt EF3 |
| | Water wall | A335 P11/ P12 A387 P11/ P12 | Automelt A81 | Automelt EB2R |
| | Boiler Tubes & Pipes | A335 P11/ P12 | Automelt B20 Plus | Automelt EB2R |
| | Water wall, Boiler Tubes & Pipes | A335 P22/ Gr 22 A387 P22/ Gr 22 | Automelt A81/ B20 Plus | Automelt EB3R |

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| | | | SAW FLUX | SAW WIRE |
| | Boiler Tubes & Pipes | A335 P91 | Automelt B20 Plus | Automelt EB91 |
| | Reactor Pressure Vessel | SA-508 Gr.3 Cl.2 | Automelt B41 | Automelt EF3 |
| 12) Power Plant Wind & Hydro | Wind Energy Tower | Structural Steel S235, S344, S420, S460 | Automelt B71/ B41 | Automelt EM12K/ EH10K/ ENi1 |
| | Penstock Fabrication | A485-C/ A537-A/ Gr 60 SA516 | Automelt B71 | Automelt EM12K |
| | | SM50B | Automelt B41 | Automelt EF3 |
| | Water Turbines | ER316L | Automelt S33 | Subinox 316L |
| | | ER410NiMo | Automelt S33 | Subinox 410NiMo |
| 13) Cladding - Corrosion Resistant Alloys (Chemical Processing Industry, Pressure vessels, Heavy Equipment Manufacturing, Oil & Gas , Power Plant) | Submerged arc wire cladding | Gr 60 /70 SA 516, SA 335, SA 387, IS 2062 | Automelt S33 | Subinox 308L, 309L, 347, 316L |
| | | | Automelt S76 | Subinox 410, 430 |
| | Electro Slag Strip Cladding | | Automelt ES1 | Subinox EQ308L, EQ309L, EQ316L, EQ309LMo, EQ347, EQ317L |
| 14) Cladding Wear Resistant alloys (Cement, Mining Sugar mill, Crushers) | Submerged arc wire cladding/ Hard Surfacing | Gr 60 /70 SA 516, IS 2062 | Automelt H25 (3L: 250 BHN) | Automelt EL8 |
| | | | Automelt H35 (3L: 350 BHN) | |
| | | | Automelt H55 (3L: 550 BHN) | |
| | | | Automelt H60 (1L: 600 BHN) | |

*For any clarifications contact TDC – Consumables, ADOR WELDING LTD.

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